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EXAMINER

HARPER, LEON JONATHAN

ART UNIT

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2166

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/752,834 | Applicant(s) MARGOLUS ET AL. | |
| | Examiner LEON HARPER | Art Unit 2166 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 62, 64-67, 167, 168 and 170-186 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 62, 64-67, 167-168, 170-186 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/18/2009 has been entered. Claim 62 has been amended. Claims 1-61, 63, 68-166, and 169 have all been cancelled. Accordingly, claims 62, 64-67, 167-168, 170-186 are pending in this office action.

Response to Arguments

Applicant's arguments with respect to claims 62, 64-67, 167-168, 170-186 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 62,64-65, 164-165, 167-168, 170-185 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6971018 (hereinafter Witt) in view of US 5, 107, 419 (hereinafter MacPhail).

As for claim 62 Witt discloses: distributed data storage system (See column 3 lines 65-67); sharing among the plurality of storage sites, a set of rules that restrict deletion of the entity versions (See column 4 lines 63-67 and column 7 lines 35-40) and , applying the shared set of rules independently at each of the plurality of storage sites, to determine whether or not the copies of the entity version can be deleted (See column 5 lines 35-40 and column 12 lines 61-65); wherein if it is determined that the copies of the entity version cannot be deleted then they also cannot be modified (See column 7 lines 40-50); wherein a client program communicating with the disk-based distributed data storage system only over the network deposits the entity version into the storage system (See column 12 lines 61-65, column 12 lines 60-65); and wherein a first request sent by the client program communicating with the disk-based distributed data storage

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system (See column 4 lines 18-23) causes the shared set of rules to restrict deletion of the entity version and wherein a second request sent by the client program after the first request would enable the entity version to be deleted in violation of the restriction caused by the first and the second request is denied wherein no request sent by the client program can enable deletion of the entity version to occur in violation of the restriction (column 12 lines 61-65 note no changes to the file are made unless allowed). Wherein the sharing step comprises storing at each of the plurality of storage sites information derived from the set off rules; Wherein the plurality of storage sites communicate with one another in order to achieve fault tolerance against the loss of storage sites (See column 7 lines 45-55) Wherein the shared set of rules restrict deletion based at least in part upon a time that was associated with the entity version by an act of the client program and wherein a third request sent by the client program after the second request causes the copies of the entity version to be deleted from the plurality of storage sites (See column 4 lines 1-3 and column and column 5 lines 36-40)

Witt does not explicitly disclose recording distinct states of stored data entities, corresponding to different moments of time, as a plurality of entity versions coexisting and storing copies of an entity version that is one of the plurality of entity versions at each of a plurality of storage sites of the distributed data storage system, and wherein both the independent application of the shared set of rules at each of the plurality of storage sites and the manner in which information that determines the rules is communicated between storage sites are

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designed to prevent alterations or corruptions of the program operation at a one of the plurality of storage sites from allowing entity version to be deleted or modified at another of the plurality of storage sited in violation of the restriction on the deletion of the entity version.

MacPhail however does disclose recording distinct states of stored data entities, corresponding to different moments of time, as a plurality of entity versions coexisting (See figure 10), recording distinct states of stored data entities, corresponding to different moments of time, as a plurality of entity versions coexisting (See figure 12a not different types of budgets, memos etc.). wherein both the independent application of the shared set of rules at each of the plurality of storage sites and the manner in which information that determines the rules is communicated between storage sites are designed to prevent alterations or corruptions of the program operation at a one of the plurality of storage sites from allowing entity version to be deleted or modified at another of the plurality of storage sited in violation of the restriction on the deletion of the entity version (See column 3 lines 25-30 and See column 12 lines 19-21 note the only outcomes are a valid file operation or a rejected file operation is the command is not valid). It would have been obvious to an artisan of ordinary skill in the pertinent at the time the invention was Witt. The modification would have been obvious because the two references are concerned with the solution to problem of data processing, therefore there is an implicit motivation to combine these references. In other words, the ordinary skilled artisan, during his/her quest for a

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solution to the cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since MacPhail's teaching would enable user's of the Witt system to provide simple to use date data for managing retention and deletion (See MacPhail column lines 53-61).

As for claim 64, the rejection of claim 62 is incorporated, and further Witt discloses: expiration times are assigned to the entity versions, independently within each of the plurality of storage sites, according to the shared set of rules, before which times both modification and deletion are prohibited (See column 4 lines 1-3 and column and column 5 lines 36-40 note: rules are standard in a distributed where each computer has it's own module rules are calculated locally).

As for claim 65, the rejection of claim 62 is incorporated, and further MacPhail discloses: no single individual is given the authority to override the deletion prohibition at all of the plurality of storage sites (See column 3 lines 59-67 note while the owner/admin can set a range once a file is at the max of the range nothing can be done).

As for claim 164 the rejection of claim 62 is incorporated, and further Witt discloses: in which applying the set of rules at a one of the plurality of storage sites determines that the entity version can be deleted and a copy of the entity

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version is deleted immediately and storage space that was used to store the copy becomes available to store new data (See column 6 lines 20-25 note: when memory is reclaimed it is immediately available).

As for claim 165 the rejection of claim 62 is incorporated, and further Witt discloses in which applying the set of rules determines that the entity version can be deleted but the copies of the entity version are only deleted if deletion is requested by a client of the disk-based distributed data storage system (See column 4 lines 18-22 for disk based system that will be making request and column 12 lines 60-65).

As for claim 167 the rejection of claim 62 is incorporated, and further Witt discloses in which, during a time interval, the shared set of rules prohibits deletion of the entity version while others of the plurality of entity versions are allowed to be deleted (See column 6 lines 1-8 note: only protected files are watched other files are free to be deleted) .

As for claim 168 the rejection of claim 167 is incorporated, and further MacPhail discloses: in which the time interval is a year in length (See figure 10)

As for claim 170 the rejection of claim 167 is incorporated, and further MacPhail discloses in which the client program causes the time interval during

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which deletion is prohibited to be extended and no subsequent action taken by the client program can cause the time interval to be shortened (See column 2 lines 35-50).

As for claim 171 the rejection of claim 167 is incorporated, and further MacPhail discloses: in which the client program causes the length of the time interval to be set and no subsequent action taken by the client program can shorten the time interval (See column 2 lines 45-57).

As for claim 172 the rejection of claim 171 is incorporated, and further Witt discloses: in which the length of the time interval is initially not set and, before the length of the time interval is set, no action taken by the client program can cause the entity version to be deleted (See column 12 lines 60-65).

As for claim 173 the rejection of claim 167 is incorporated, and further Macphail discloses: in which no action taken by any client program that only communicates with the disk-based distributed data storage system over the network can cause the time interval to be shortened (See column 2 lines 45-55 note: if not action can be taken then no action can be taken)..

As for claim 174 the rejection of claim 62 is incorporated, and further Witt discloses: in which the plurality of entity versions record historical states of a

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single stored data entity, with each of the plurality of entity versions associated with a historical time interval during which the recorded historical state was the state of the single stored data entity (See column 7 lines 15-25).

As for claim 175 the rejection of claim 174 is incorporated, and further MacPhail discloses: in which the shared set of rules that determine whether or not the entity version can be deleted depend at least in part on the length of the historical time interval associated with the entity version (See figure 10).

As for claim 176 the rejection of claim 174 is incorporated, and further MacPhil discloses: in which the shared set of rules that determine whether or not the entity version can be deleted depend at least in part on whether or not the historical time interval associated with the entity version includes a specified moment of time (See figure 11 note time cannot be before the minimum or after the maximum).

As for claim 177 the rejection of claim 62 is incorporated, and further Witt discloses: in which a stored data entity is a file in a file system or a record in a database or an object in an object storage system (See column 5 lines 32-37).

As for claim 178 the rejection of claim 62 is incorporated, and further Witt discloses: in which two of the plurality of storage sites are at least a mile apart (See column 5 lines 5-7 note: definition of wide area network)

As for claim 179 the rejection of claim 62 is incorporated, and further Witt discloses: in which the set of rules comprise a program that is separate and distinct from the software that implements the disk-based distributed data storage system and sharing occurs at the time when the plurality of entity versions are being stored in the storage system (See column 5 lines 12-19).

As for claim 180 the rejection of claim 62 is incorporated and further Wilt discloses: in which the entity version is a version of a stored data entity and the first request causes a new version of the stored data entity to be stored (See figure 9).

As for claim 181 the rejection of claim 62 is incorporated and further Wilt discloses: in which the first request assigns an expiration time to the entity version, before which time deletion is prohibited (See column 5 lines 35-40).

As for claim 182 the rejection of claim 62 is incorporated and further Wilt discloses: in which the second or third request attempts to delete the entity version or to change the time associated with the entity version (See column 6 lines 5-15).

As for claim 183 the rejection of claim 62 is incorporated and further Wilt discloses: in which the entity version is a version of a stored data entity and the

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third request causes a new version of the stored data entity to be stored (See column 5 lines 50- column 6 line 7).

As for claim 184 the rejection of claim 62 is incorporated and further Wilt discloses: in which the time associated with the entity version is a time when the entity version was created, transmitted or stored; or had some property changed; or a time assigned to the entity version (See column 6 lines 5-15)

As for claim 185 the rejection of claim 62 is incorporated and further Wilt discloses: in which the shared set of rules are communicated to the plurality of storage sites at the time that the client program communicating with the disk-based distributed data storage system deposits the entity version into the storage system (See column 1 lines 30-40).

As for claim 186 the rejection of claim 186 is incorporated and further Witt discloses: in which care is taken to ensure that operators and administrators of the disk-based distributed data storage system have no special privileges or physical access that would allow them to circumvent or change the shared set of rules at all of the plurality of storage sites (See column 8 lines 10-15).

Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEON HARPER whose telephone number is (571)272-0759. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LEON HARPER/
Examiner, Art Unit 2166
August 2, 2009